

Resource Summary
Cambria State Marine Conservation Area
July 2010

I. INTRODUCTION

Purpose

Section 5002.1 of the Public Resources Code (PRC) requires that an inventory of the scenic, natural, and cultural features be submitted by the Department of Parks and Recreation to the California State Park and Recreation Commission for its consideration when classifying or reclassifying an area. This purpose of this document is to provide the requisite inventory information to reclassify Cambria State Marine Conservation Area as a State Marine Park.

Background

The Cambria State Marine Conservation Area (SMCA) was classified and named by the California Fish and Game Commission in September 2007 as part of a network of new marine protected areas in the Central Coast region under the Marine Life Protection Act planning process. In addition to classifying the area, the commission adopted special fishing regulations that allow for recreational take of living marine resources but no commercial take. In taking their action, the commission also recommended that the area be considered for reclassification by the California Park and Recreation Commission as a State Marine Park.

According to Section 5019.56(a) of the PRC, state park system lands seaward of the mean high tide line containing ecological, geological, scenic, or cultural resources of significant value shall be preserved and designated as state marine reserves, state marine parks, state marine conservation areas, or state marine cultural preservation areas

This Resource Summary has been prepared for proposed reclassification from State Marine Conservation Area to State Marine Park. The definition for this classification is found in Sections 36700(b) of the PRC, and reads as follows:

36700(b). A "state marine park" is a nonterrestrial marine or estuarine area that is designated so the managing agency may provide opportunities for spiritual, scientific, educational, and recreational opportunities, as well as one or more of the following:

- (1) Protect or restore outstanding, representative, or imperiled marine species, communities, habitats, and ecosystems.
- (2) Contribute to the understanding and management of marine resources and ecosystems by providing the opportunity for scientific research in outstanding representative or imperiled marine habitats or ecosystems.
- (3) Preserve cultural objects of historical, archaeological, and scientific interest in marine areas.
- (4) Preserve outstanding or unique geological features.

II. AREA DESCRIPTION

Cambria SMCA runs along the shore approximately 5.8 miles, approximately 75% of its shoreline borders Hearst San Simeon State Park (Figure 1). It encompasses an area of 6.26 sq miles and a depth ranging from 0-105 feet with 22% hard bottom and 78% soft bottom. The primary habitat types are: sandy beach, rocky intertidal, surfgrass, shallow hard and soft bottom, and kelp bed.

This area is bounded by the mean high tide line and straight lines connecting the following points in the order listed:

35° 37.10' N. lat. 121° 09.20' W. long.;
35° 37.10' N. lat. 121° 10.70' W. long.;
35° 32.85' N. lat. 121° 06.70' W. long.; and
35° 32.85' N. lat. 121° 05.85' W. long.

The commercial take of all living marine resources is prohibited but recreational take is allowed.

Cambria SMCA is almost entirely within the Monterey Bay Marine Sanctuary and the Sea Otter Refuge. As part of a network of marine protected areas, the area, in conjunction with adjacent White Rock State Marine Conservation Area and nearby Piedras Blancas State Marine Reserve, provides a comparison of managed use within the Central California seascape province. Each of the marine protected areas has long-term monitoring programs associated with them that quantify fish, invertebrates and plants.

Many rocky outcroppings are scattered along the shoreline of Cambria SMCA. All of the rocky areas that are exposed at mean high tide are part of the California Coastal National Monument established by Presidential Proclamation No. 7263 in January 2000 to recognize and protect these biological and geological “treasures”. The monument extends along the entire coastline of California and contains more than 20,000 rocks, pinnacles and small islands. The monument includes lands retained by the Federal government and is administered by the Bureau of Lands Management. Monument lands are co-managed by State Parks and Department of Fish and Game under a Memorandum of Understanding signed in May 2000. These rocky outcroppings provide important habitat for intertidal species as well as important haul outs for a variety of marine mammals and roosting areas for sea birds.

Hearst San Simeon State Park provides a land-based platform for educating the public about the land-sea connection, the need for protection, and the special marine managed area designations established by both the state and federal government along this region of the coast.

III. NATURAL RESOURCES

Nearshore Habitats

The following rocky shore types have been mapped in the Central Coast study region by the National Oceanic and Atmospheric Administration for the Environmental Sensitivity Index in 2002. The percentage of each shore type was extracted from this dataset for Cambria SMCA (Figure 2):

Coarse-grained sand beach: 38.9% of shoreline, characterized as moderate-to-steep beach of variable width with soft sediments, typically at river mouths; may be backed by dunes or cliffs; fauna scarce.

Exposed wave cut rocky platform: 18.5% of shoreline, characterized as including flat rocky bench of variable width with irregular surface and tidepools. Shore may be backed by scarp or bluff with sediments or boulders at base. Some sediment accumulation occurs in pools and crevices. These areas may support rich tidepool and intertidal communities with algae, barnacles, snails, mussels, sea stars, crabs, and polychaetes.

Exposed rocky cliff: 18% of shoreline, characterized as having steep intertidal zone (greater than 30 degrees slope) with little width and little sediment accumulation. There is strong vertical zonation of intertidal communities; barnacles, mussels, limpets, sea stars, anemones, crabs, and macro-algae abundant.

Exposed wave cut rocky platform and Coarse-grained sand beach: 14.8% of shoreline with mixed characteristics of the two classifications.

Coastal marsh: 5.3% of shoreline, characterized as including intertidal areas with emergent vegetation, either salt marsh or brackish marsh. The width of marsh varies from a narrow fringe to extensive areas and provides important habitat for a variety of species.

Sheltered tidal flats: 1.6% of shoreline, characterized as including intertidal flats comprised of silt and clay (eg, mudflats). They are present in calm water habitats and sheltered from wave exposure; frequently bordered by marsh. Soft sediments support large populations of worms, clams, and snails; important foraging area for migrating shorebirds.

Coastal marsh and Sheltered tidal flats: 2.3% of shoreline, characterized as shoreline with mixed characteristics of two classifications.

Sheltered rocky shore: 0.3% of shoreline, characterized as bedrock shores of variable slope (cliffs to ledges) that are sheltered from wave exposure. The intertidal community may include algae, mussels, barnacles, anemones, sea stars, snails, and crabs. Sheltered rocky shores are very rare in central California, they are typically found inside bays or estuaries.

Exposed tidal flats: 0.1% of shoreline, characterized as including intertidal flats composed of sand and mud. The presence of some wave exposure generally results in a higher presence of sand than in sheltered tidal flats; occurs in bays and lower sections of rivers. Sediments in tidal flats are generally water saturated with the presence of an infaunal community that attracts foraging shorebirds. Tidal flats are used as a roosting site for birds and haulout site for marine mammals. Exposed tidal flats are very rare in Central California.

Offshore Habitats

The Department of Fish and Game provided spatial mapped data on hard and soft substrata based on data compiled by Greene et al. (2004) for the *Fisheries Habitat Characterization of the California Continental Margin*. For the area the following percentages were calculated (Figure 2):

Soft Bottoms: 22% of the area is characterized as soft bottom. Soft bottom habitats are found in estuaries, along sand beaches, and on the continental shelf and slope throughout the region. Soft bottom habitats lack the structural complexity and relief of hard bottom substrata and are generally dominated by bottom dwelling invertebrates and fishes. Soft bottom habitats can be highly dynamic in nature as sediments shift due to wave action, bottom currents, and geological processes.

Hard Bottoms: 78% of the area is characterized as hard bottom. Hard bottom areas (rocky reefs) within the study region are also well known to commercial and recreational fishermen, as well as other mariners and researchers. The species that associate with hard substrata differ greatly with depth and type of substratum. Rocky reefs provide hard substrata to which kelp and other alga can attach in the nearshore (<30m depth). In addition, many invertebrates such as sponges and anemones require hard substrate for attachment and are found only on hard surfaces. In addition to attached organisms, the structural complexity of rocky reefs provides habitat and protection for mobile invertebrates and fish. The fauna of rocky reefs differs by depth zone and substratum type (i.e., the amount of relief changes with gravel, cobble, boulders, and smooth rock outcrop).

Kelp Forests: Kelp beds are found along hard substrata in the near shore (Figure 3). Kelp forests are one of the most productive marine habitats along the coast of California and provide habitat and nursery areas for many species of fishes and invertebrates. California's giant kelp forests are globally unique and significant. Studies have shown that distribution and abundance of kelp beds and successional processes are effected by climatic and oceanographic changes, abundance of urchins and other grazers, as well as certain types of fisheries.

Two species of canopy-forming brown macro-algae species of kelp are found within the area –giant kelp and bull kelp. The two kelp forests differ in their biological productivity. Giant kelp, the dominant species in the area, forests are more productive. Kelp beds are persistent over time but exhibit marked seasonal and annual changes in the extent of the canopy, primarily due to winter storm activity and changing oceanographic conditions such as El Niño events.

Aquatic Fauna

A notable marine mammal in the area is the sea otter. Otters are a keystone species, exerting strong top-down control on their prey species. Their predation on sea urchins has been shown to limit urchin abundance, allowing for the growth of kelp forests and associated species. Sea otters use many nearshore habitats along the coast, from estuaries to kelp forests and rocky habitats; typically sea otters are found nearshore but sometimes are seen as much as 10km from shore.

California sea lions and harbor seals are common and seen throughout the year. The Northern elephant seal may be found along the northernmost portion of the area.

Fishes found in this region of the state are representative of the South-Central Coastal Ichthyofaunal Province. Common species include: mackerel sharks, leopard sharks, eagle rays, surfperches, greenlings and lingcods, rockfish, sculpins, sardines and herrings, pricklebacks, mackerels and tuna, and salmon and trout.

Intertidal invertebrates are quite numerous. Some of the most abundant species include sea anemone species, the ocher starfish, pink barnacle, white buckshot barnacle, hermit crab, sand crab and sand flea.

IV. CULTURAL RESOURCES

The State Lands Commission shipwreck database has no record of any existing shipwrecks within Cambria State Marine Conservation Area and there are no other known underwater cultural resources.

V. RECREATIONAL RESOURCES

Recreational activities most associated with the area include: surfing, steelhead fishing, surf fishing, beachcombing, scuba diving, and sea kayaking.

Public land access to the area is found both within the boundaries of Hearst San Simeon State Park as well as at Shamel County Park, Fiscalini Ranch Preserve (Cambria Community Services District), and other public access points along the Cambria and San Simeon communities.

Recreational fishing is expected to benefit from the prohibition of commercial fishing as well as from the areas proximity to both Piedras Blancas State Marine Reserve to the north and to White Rock State Marine Conservation Area to the immediate south. Both of these marine protected areas restrict all fishing. It has been shown that marine protected areas that afford the maximum protection result in larger individual fish. Large fish produce more and larger young, thereby increasing the reproductive output of the area. Therefore, in addition to the absence of potential competition for fish resources from commercial fishing, an anticipated outcome of the MPA network is the "spillover" of young fish from the more protective marine protected areas.

Leffingwell Landing, located near the center of the Cambria SMCA in the Moonstone Beach Drive area, is an important coastal recreational site within Hearst San Simeon State Park. The site has day use parking, picnic areas, a beach area, and a boat launching ramp. The site is a good place to observe sea otters and is also a favorite of shore fishermen. The paved boat ramp on the south side of Leffingwell Creek is where divers and fishermen can launch small boats and kayaks. Leffingwell Headlands form a small cove at this point that partially protects the boater, but it appears that most often it requires going through some waves to launch a boat.

Figure 1

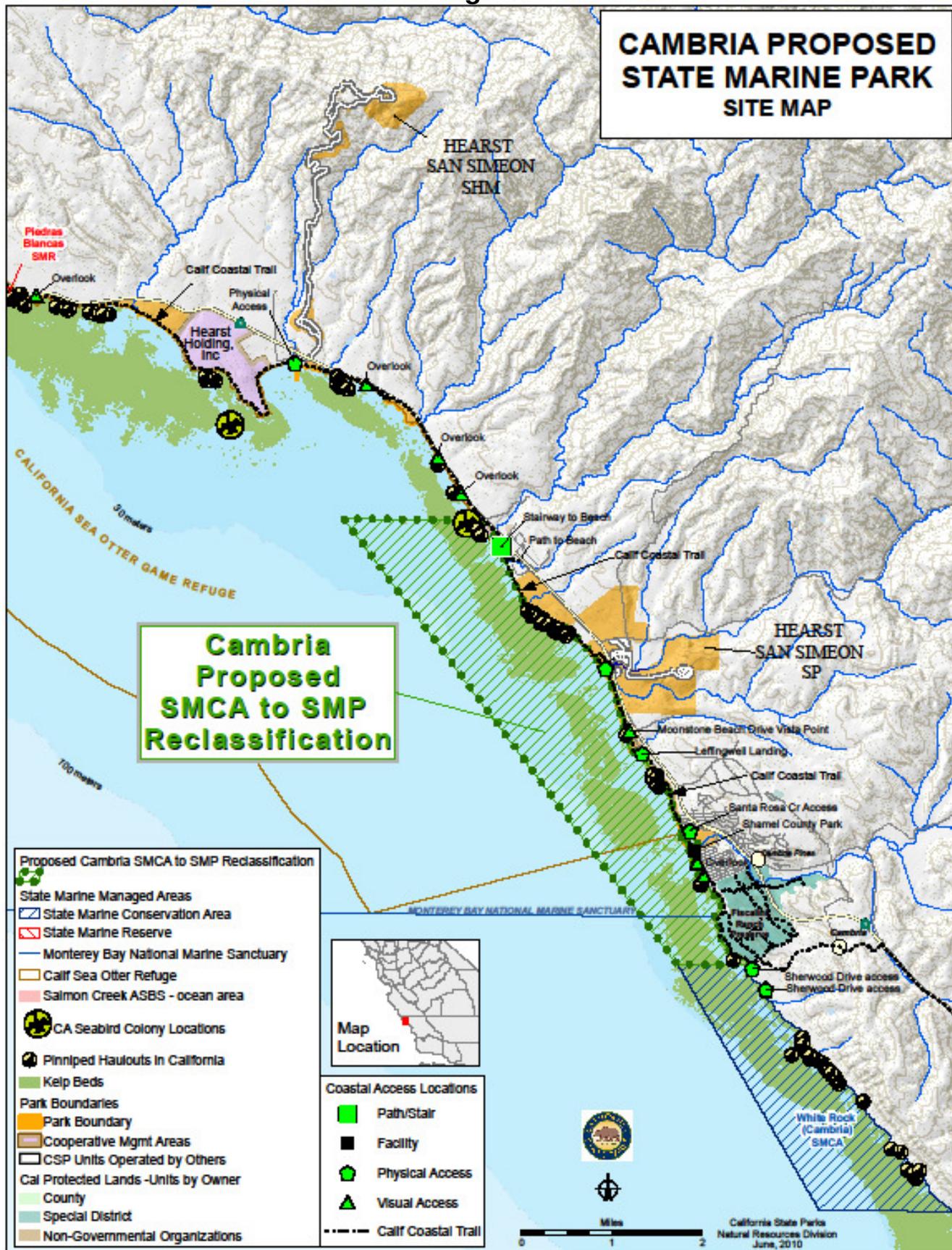


Figure 2.
Substrate Types of Cambria State Marine Park

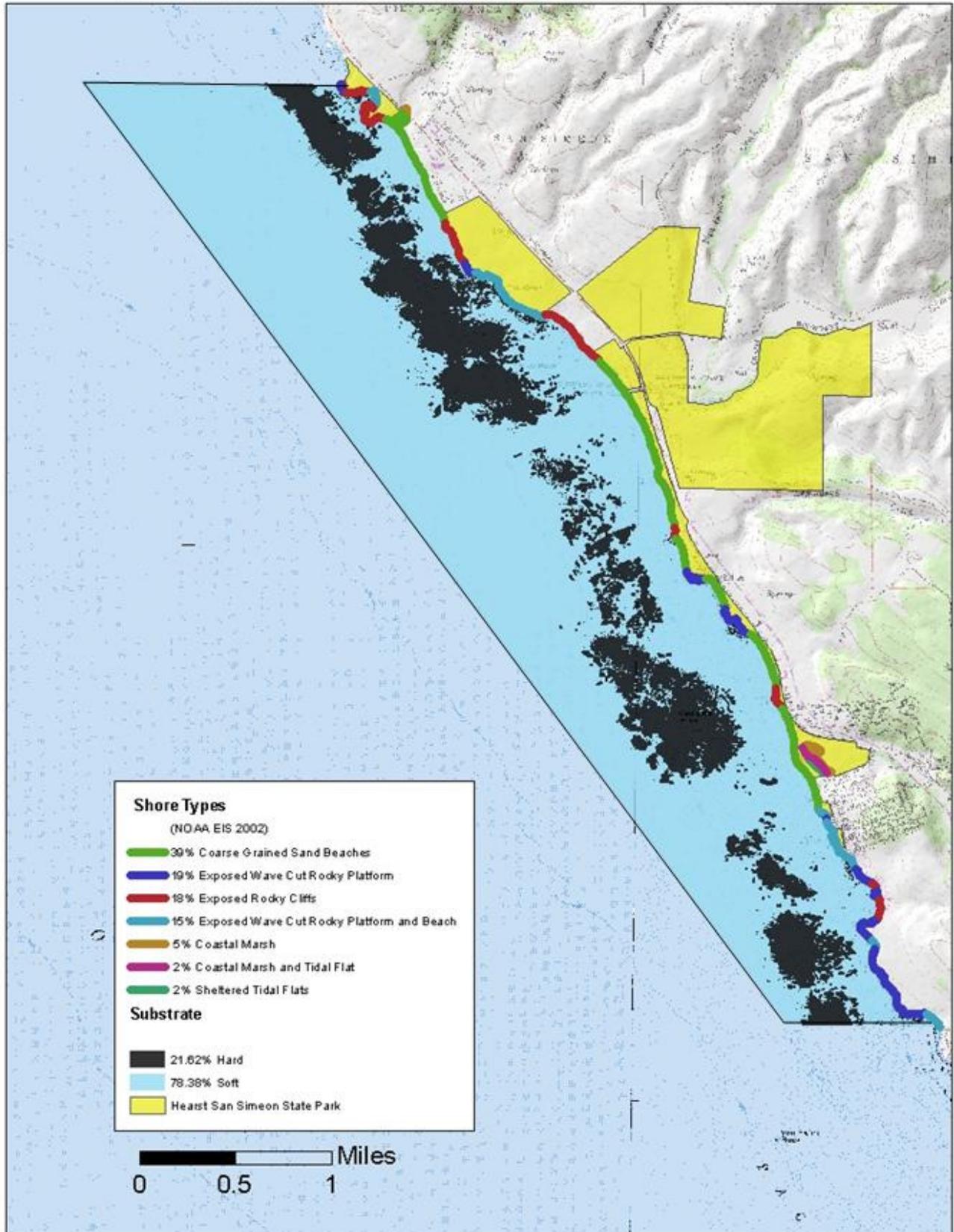


Figure 3.
Kelp Beds of Cambria State Marine Park

